

LISTING OF THE CLAIMS

Claims 1 to 35 (canceled).

36 (new): A treatment method for improving fatigue life of a metal material characterized by comprising the steps of ; for portions of the metal material for which fatigue may become a problem:

(a) detecting a crack for the portions to be subjected to the ultrasonic impact treatment by liquid penetrant examination, magnetic particle examination or eddy current examination;

(b) if a crack is detected, removing the crack by a grinder or by gouging;

(c) if a removal depth is as deep as 5 mm or greater, repairing the removal portion by buildup welding;

(d) then performing ultrasonic impact treatment; and then

(e) confirming that a curved surface having depth of 0.05 mm or greater and a radius curvature of 0.5 mm or larger is formed at the ultrasonic impact treated surface.

37 (new): A treatment method for improving fatigue life of a metal material according to claim 36 wherein:

said method further comprises:

applying a paint containing mirco-capsules to a surface of the metal material treated by said ultrasonic impact treatment;

whereby, subsequent generation of a crack in said surface of the metal material breaks said said micro-capsules contained in the applied paint at a subsequent generated crack location, wherein a paint of different color oozes out of said broken micro-capsules, thus visually identifying said subsequent generated crack.

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38 (new): A metal material that has been treated using a treatment method for improving fatigue life according to claim 36 or 37.